

by Jim Wheeler

In 1850, close to 2,000,000 acres of old-growth coast redwood forest canopy mantled the coastal mountains of California. Today, less than four percent of that canopy remains.

Old-growth (ancient) redwood forests are not simply stands of big, beautiful trees — they are relatively stable, complex ecosystems dominated by large conifer trees hundreds of years old. Some redwoods grow to be two thousand years old and more than 360 feet tall.

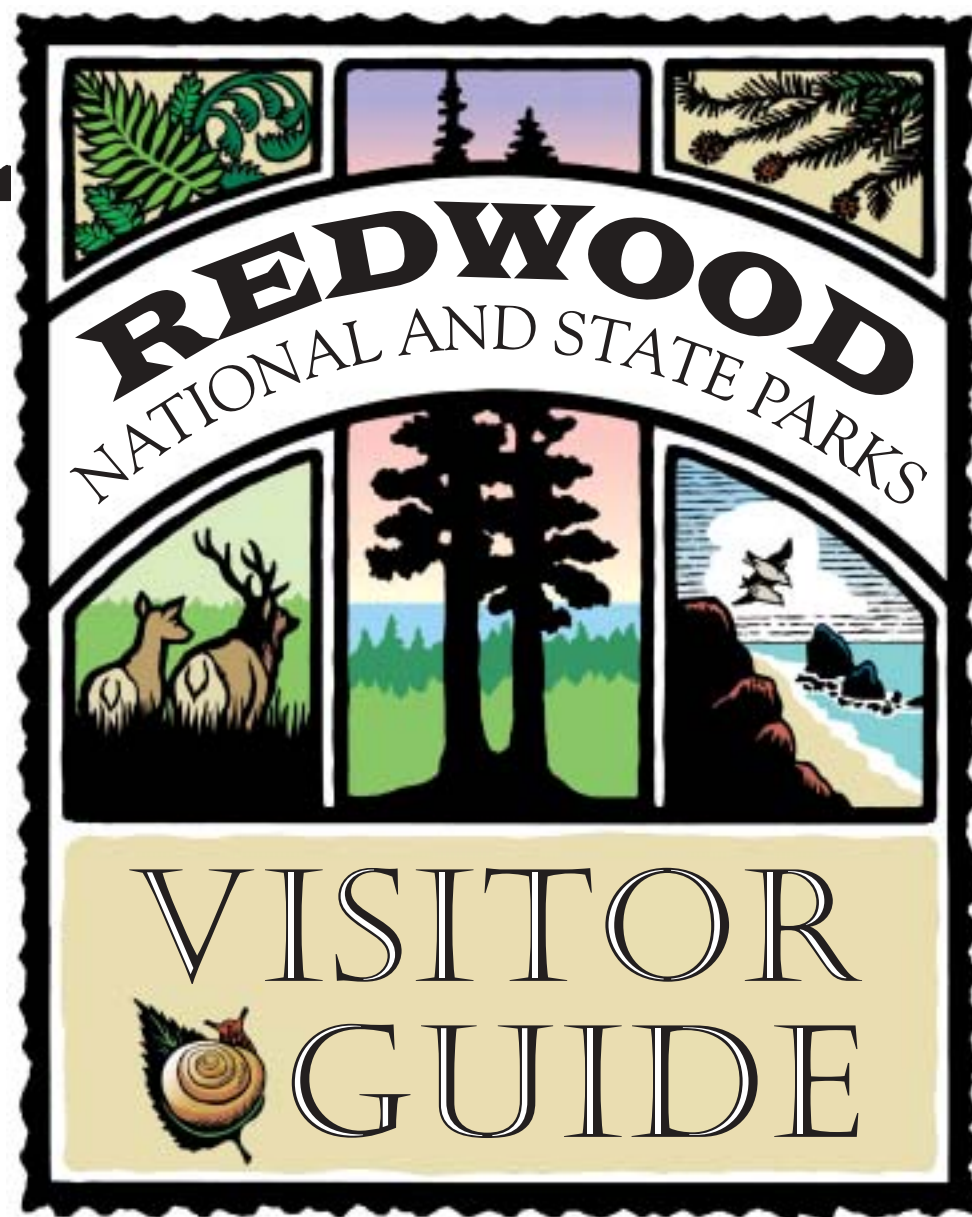
Large trees are often widely spaced and highly individual, shaped over centuries by windstorms, drought, and fire. These four ingredients: age, wind, drought, and fire combine to produce the gnarliest forest canopy in the world, one that supports entire ecosystems in the sky.

AGE. The remnant old-growth redwood forests that exist in the parks today are among the oldest forests on earth. Redwoods reach the upper canopy within 200-400 years, enabling them to develop individual characteristics that create some of the most complex tree crowns ever found.

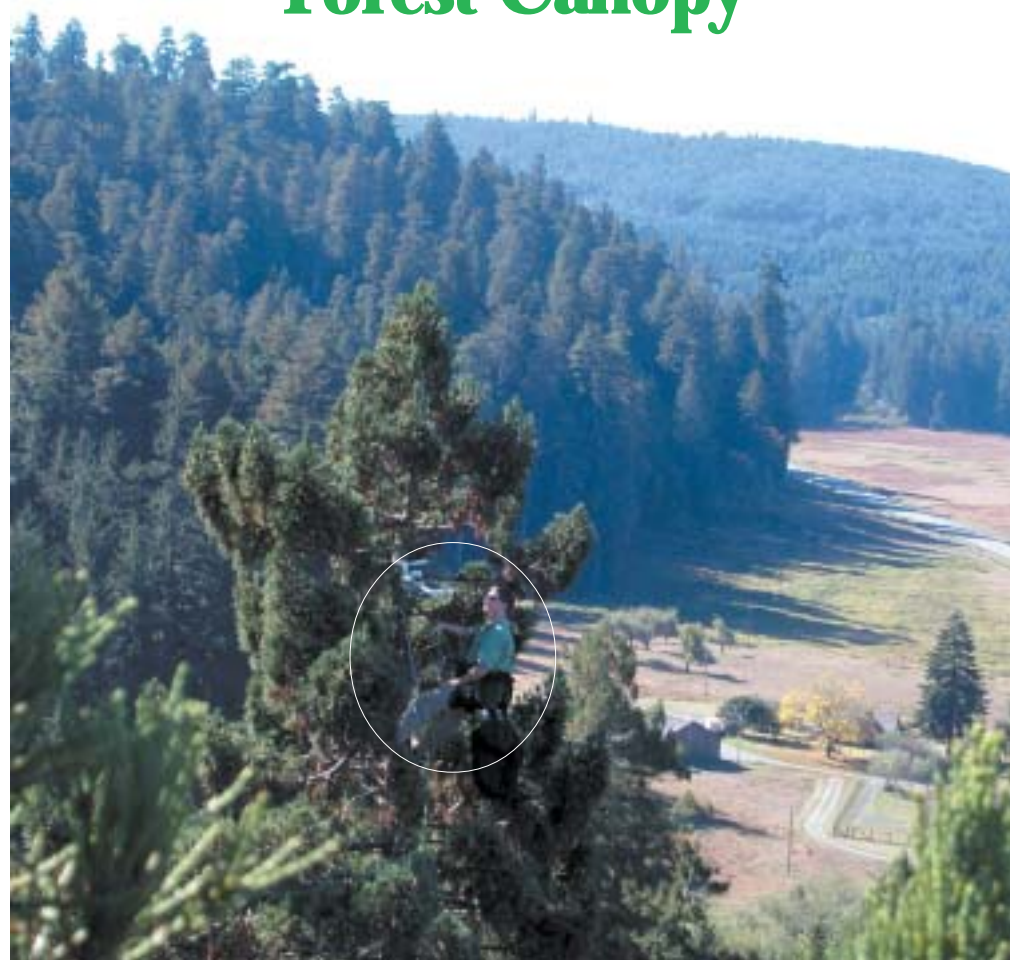
Above 150 feet, primeval redwood trees develop massive limbs that can support tree-sized trunks growing on them. Multiple trunks growing in one treetop appears as a rounded silhouette from a distance. Previously logged, even aged younger forests contain conifers less than 150 feet tall that all have pointed tops with young branches.

With time, deep organic soils accumulate on large limbs. Thirteen different species of plants, shrubs, and trees, most of which normally grow on the forest floor, grow in these soils. The soil mats provide homes to thousands of invertebrates, mollusks, earthworms, and salamanders.

WIND. During gale-force winds, branches or trunks from adjacent trees knock against each other causing wounds or breakage. The injuries within the crowns allow light to pass through the canopy, which results in new sprouts on trunks and branches. As a result of longevity and responses to wind damage, many ancient redwoods have extremely intricate crowns consisting of



## Recipe for a Healthy Forest Canopy



The scientific exploration of old-growth redwood forest canopies began in 1996 when Dr. Steve Sillett, seen here at 320 feet up in one treetop of Prairie Creek Redwoods State Park, began teaching at Humboldt State University. His research team discovered entire ecosystems in the redwood canopy. Yet the canopy and the forest floor have much in common!

Photo by George Koch

multiple tree trunks, each supporting its own system of branches — *and all within the crown of a single tree.*

Called reiterations, these trunks emerge from huge lateral branches that often rival the diameter of the largest trees in other forests. One tree on Redwood Creek has 148 reiterations beginning about 150 feet above ground. From a distance, its broad crown can easily be mistaken for several large trees growing close together.

DROUGHT. Although annual rainfall can exceed 80 inches, from late May to November redwood's experience the dry season. During drought years, some treetops die back. From across a river or a prairie, look at the old redwoods — many display dead tops. Yet they are not dead. During wet years a typical redwood will resprout several new trunks from just below the dead top, developing a series of new leaders heading for the sky.

Amazingly, reiterated trunks develop root systems in accumulated soils at their base, aiding the whole tree in water transport to its highest reaches. During the dry season, the lush, multi-faceted canopy soaks up moisture from coastal fog, and fog can account for up to one-third of the water a giant needs annually.

FIRE. Fire reaches the canopy in two ways: Low-intensity fires on the ground slowly smolder up the bark and into the canopy or lightning strikes an individual tree. Either way, fire generates new sprouts — expanding and strengthening canopy layers.

AN UNSEEN WORLD RE-VEALED. Until recently, this unseen world in the old-growth canopy remained a mystery. Few of us will ever see the gnarly treetop world of marbled murrelets, red tree voles, and northern spotted owls.

Today, scientists use modern archery and rope-based climbing technology to uncover entire ecosystems within the forest canopy — revealing age, wind, drought, and fire as the mixture that makes a canopy complex. Exposing this unseen world is redefining the significance of remaining old-growth forests.



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## Visitor Activities

Come join Redwood National and State Parks staff in activities that are both fun and educational for the whole family. For schedules, times, topics, and locations of all programs listed below, check at the visitor centers or on campground bulletin boards. The campfire circles at Jedediah Smith, Mill Creek, and Elk Prairie campgrounds are wheelchair accessible.

### ACTIVITIES: JUNE 12 – SEPTEMBER 5

**Campfire Programs** – Here's your chance! Learn more about a redwood-related topic. Varied activities may include narrated slides, music, games, or storytelling. People of all ages can enjoy these programs given at:

- Jedediah Smith Redwoods State Park campground
- Mill Creek campground in Del Norte Coast Redwoods State Park
- Prairie Creek Redwoods State Park campground

**Nature Walks and Talks** – Be a part of the forest, sea, or prairielands. Join a ranger to learn more about the natural communities in one of the most diverse areas of the world. Offered at various locations and times throughout the parks.

**California State Park Junior Ranger Programs** – Children ages 7 to 12 are encouraged to participate in a fun and educational activity. Topics focus on the people, plants, animals, and life systems of the redwood region. Offered at Jedediah Smith, Prairie Creek, and Del Norte Coast Redwoods State Parks.

**Redwood National and State Parks Junior Ranger Program** – Come to one of the five visitor centers to pick up a Redwood Junior Ranger activity newspaper (\$2.00). If you have a few days to spend in the parks, children ages 7 to 9 can complete four activities and children ages 10 to 12 can complete six activities to earn a patch. If you have one day or less, children 7 to 12 can complete three activities to earn a sticker.

**Tidepool Walk** – Discover the wonders of the sea! All tidepool walks meet at the Enderts Beach parking area near Crescent Beach Overlook south of Crescent City. The walk takes about 2-1/2 hours. For your safety, please wear shoes that have nonslip soles and can get wet.

*Come prepared to ranger-led walks — Carry water and snacks. Wear shoes that can grip the slippery rain forest floor. Lock all valuables in the trunk of your vehicle. Keep your wallet with you.*

### SPECIAL EVENTS

**AUGUST 21** – Banana Slug Derby. Join us for the parks' annual slimy slug race. For more information contact North Coast Redwood Interpretive Association at (707) 464-6101, ext. 5300.

**SEPTEMBER** – Jammin' at Jed. Join us at Jedediah Smith Redwoods State Park for music along the Smith River. Check visitor centers for day, times, and talent.

**OCTOBER 9** – Discovery Ride in Redwood National and State Parks. Enjoy the park on bicycle for easy 10-mile and challenging 28-mile rides. For more information, contact North Coast Redwood Interpretive Association.

**DECEMBER 11** – Candlelight Celebration of the ancient forest at Prairie Creek Redwoods State Park. Experience the redwoods by candlelight. Short walk and program are free to the public. For more information, contact North Coast Redwood Interpretive Association.

### REDWOOD FIELD SEMINARS

Ancient forests, colorful grassland prairies, deep rock canyons, and pristine river estuaries — these are your classroom for a day. For more than 20 years, Redwood Field Seminars have paired subject-matter experts with small groups of amateur naturalists for concentrated and personal day-long field trips. Redwood Park Association, a non-profit partner in the parks' education programs, directs the seminars.

Science, history, and recreation strengthen your connection to this grand landscape. Ask at a visitor center for detailed information. Preregistration is required. Call (707) 464-6101 ext. 5095. There is a fee for each course. 2004 programs are to be announced.

## WELCOME

*The tranquility of a towering redwood inspires people worldwide. Even though these ancient forests are protected, great challenges remain and parks will become even more valuable in the new millennium with an ever-growing population.*

*The movement to preserve the redwoods on this part of the California coast took shape more than 75 years ago when Prairie Creek Redwoods State Park was established and further developed when Congress created Redwood National Park in 1968 and expanded the park in 1978.*

*In 1994 the National Park Service and the California State Parks agreed to cooperatively manage four parks — Redwood National Park, Prairie Creek, Jedediah Smith, and Del Norte Coast Redwoods State Parks — as a complex to provide maximum resource protection and the best possible visitor services.*

*Redwood National and State Parks form a World Heritage Site and are part of the California Coast Range Biosphere Reserve, designations that reflect worldwide recognition of these resources as irreplaceable. They must be safeguarded.*

*We hope you enjoy your visit to these parks. Whether your adventures include hiking the many park trails or enjoying a tidepool walk with a ranger, please remember to be a thoughtful protector. When you depart, we hope you will take with you inspiration, memories, and an enhanced appreciation for these redwood forests. Please leave only footprints.*

*Richard C. Sermon  
State Parks Superintendent*

*Bill Pierce  
National Park Superintendent*

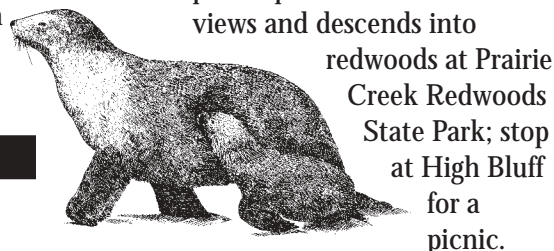
Visit our website at [www.nps.gov/redw](http://www.nps.gov/redw)

# A Day in the Parks

If you have just arrived at Redwood National and State Parks and are wondering how to make the most of your time, try these suggestions to help plan your visit. Look for these place names on your official map and guide or stop at one of our five visitor centers listed on page 12. Suggestions are listed north to south. Driving time from the north (Hiouchi) to the south (Kuchel Visitor Center) with no stops is approximately 1-1/2 hours.

## HALF DAY

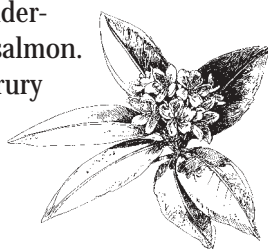
- **Howland Hill Road/Stout Grove** — 10-mile scenic drive through old-growth redwoods, along Mill Creek, and past the pristine Smith River; 1/2-mile walk through river bottom grove of tremendous trees. Trailers not advised.
- **Enderts Beach/Crescent Beach Overlook** — Outstanding view from the overlook; 1-mile trail to Enderts Beach provides access to tidepools. Check low tide times. Take Enderts Beach Road, 3 miles south of Crescent City.
- **Lagoon Creek/Yurok Loop** — Fishing and birdwatching; 1-mile Yurok Loop trail offers ocean views or hike 1 mile, one way to Hidden Beach and go tidepooling. Check low tide times.
- **Klamath River Overlook** — Watch for whales, other marine mammals, and seabirds; hike steep 1/4-mile trail to lower overlook for a more dramatic view. Take Requa Road.
- **Newton B. Drury Scenic Parkway/Big Tree Wayside** — 10-mile scenic drive through old-growth redwoods; 1/8-mile walk to Big Tree Wayside; view Roosevelt elk in the prairie.
- **Davison Road** — View Roosevelt elk; 2-1/2-mile Trillium Falls Trail.
- **Lady Bird Johnson Grove** — Ridgetop old-growth redwoods on an easy 1-mile walk; Redwood Creek Overlook picnic area. Take Bald Hills Road. Trailers not advised.



redwoods at Prairie Creek Redwoods State Park; stop at High Bluff for a picnic.

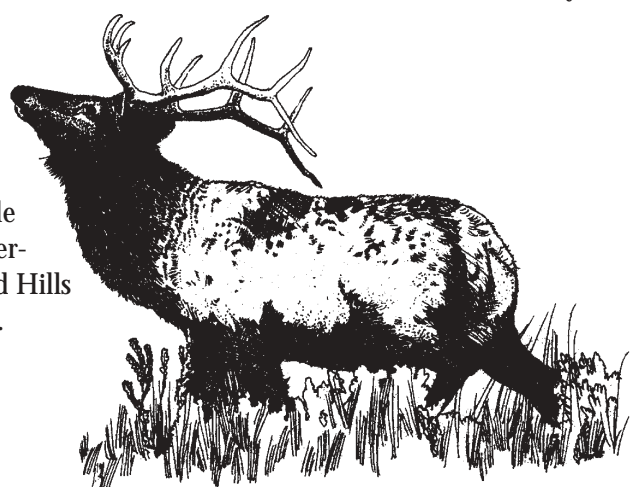
Trailers not advised.

- **Brown Creek Loop** — 4-mile loop through old-growth forest with rhododendron understory, creek with salmon. On Newton B. Drury Scenic Parkway.
- **Gold Bluffs Beach** — Go beyond Davison Road to access this isolated Pacific beach; continue to Fern Canyon and walk amidst 30-foot walls of ferns; birdwatching; many hiking trails into Prairie Creek Redwoods State Park. Day-use fee area. Trailers prohibited.



- **Lyons Ranch** — 4-mile-round trip trail along prairies to a homesteader's site, spring wildflowers; escape the coastal summer fog. At the end of Bald Hills Road. Trailers not advised.

- **Kayak** — Kayak the Smith River's clear, turquoise waters past rugged rock walls to redwoods, or kayak the Klamath River where wildlife abounds in the estuary.



## WHOLE DAY

Add the following stops to those suggested for half-day visits.

- **Nickerson Ranch** — 2-mile hike among old-growth redwoods, along Mill Creek, over a moss-covered bridge, finish on Howland Hill Road back to your vehicle.
- **Damnation Creek** — 4-1/2-mile trail through old-growth trees to the ocean shore; steep scramble to access ocean. Hwy. 101, milepost 16, south of Crescent City.
- **Coastal Drive** — Rough 8-mile road winds past expansive Pacific Ocean views and descends into

## RECYCLING IN THE PARKS

Look for these two symbols for recycling and trash collection throughout the parks. You can also recycle newspapers in the campgrounds. Talk to a ranger or a camp host.

### RECYCLE

Aluminum

Plastic

Glass

Tin



ONLY

### TRASH



ONLY

## YOUR DOLLARS HELP

The National Park Service's Fee Demonstration Program has provided funds for new interior exhibits for Kuchel Visitor Center and 47 new outdoor exhibits, both in the planning stages at Redwood National and State Parks. Additional fee money was recently received to relocate the parks' south entrance sign, develop a safe vehicle turn-out along Highway 101, and develop seven new outdoor exhibits for Freshwater Lagoon Spit. Planning and design work on the turn-out and new exhibits is taking place this year.

Congress established the Fee Program in 1997 to assist parks in funding projects that improve visitor facilities and better protect park resources. The program allows for 80 percent of the fees collected at a national park site to stay within that park. Other parks such as Redwood do not collect fees. They compete for the remaining 20 percent to complete projects. These new interpretive exhibits are an example of your fee dollars at work throughout the national park system.

**UserFee**

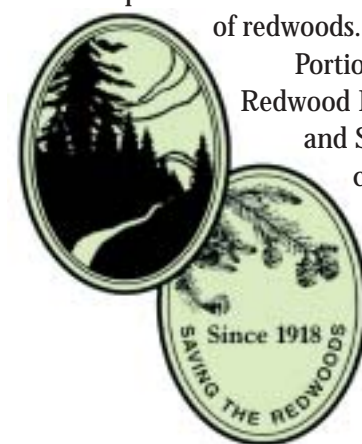
Improves this park



## SAVE-THE-REDWOODS LEAGUE

The road was dusty and the trip was long back in 1915 when three men traveled from San Francisco to see for themselves the towering trees and the impending effect of the ax. So impressed were Dr. John C. Merriam, Professor Henry F. Osborn, and Dr. Madison Grant that they immediately sought means to preserve redwood groves for future generations.

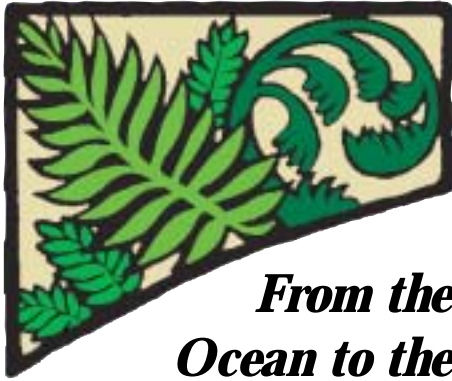
In 1918 they established the Save-the-Redwoods League and since then the non-profit organization has set aside over 130,000 acres of redwoods. Through public donations and matching funds from the State of California, the League purchases stands of redwoods and helps to raise worldwide awareness of redwoods.



Portions of Redwood National and State Parks comprise land donated by the League. The brown and gold signs

seen along trails and roadways represent the Memorial Grove Program, started in 1921. More than 800 groves, named for individuals and organizations, have been set up, with more being added each year. They are instrumental in saving redwoods.

The Save-the-Redwoods League has more than 43,000 members from all over the world. If you would like more information about the League, you can contact them at 114 Sansome Street, Room 605, San Francisco, California, 94104, (415) 362-2352. The website address is [www.savetheredwoods.org](http://www.savetheredwoods.org).



## From the Ocean to the Redwood Canopy

Pacific northwest old-growth forest canopies provide a home to one of the rarest and most unique seabirds in the world, the marbled murrelet. No one knew where the robin-sized bird nested until 1973, when the first nest was discovered on a large branch high in a colossal redwood tree — making murrelets the only non-tropical seabird to nest in trees.

Most of the murrelets left in California nest in Redwood National and State Parks. They are a “poster bird” for ancient trees: The murrelets’ presence indicates a healthy forest. Today the forest is fragmented, a patchwork of old- and second-growth areas. With fewer places on high to land and raise a chick, these spotty-colored birds are federally-listed as threatened.

**Marbled murrelet adult on nest and a chick.** *Photos by Ron LaValley*



As you stand — back arched, neck extended — trying to look into the round-top canopies at Prairie Creek Redwoods State Park, listen. At dusk or dawn, you may hear the sharp *keer* of a murrelet overhead. One adult is returning to the nest with food. If you are incredibly lucky, you will see the poster bird for a healthy forest speed through the sky like a bullet.

• • • • •

### **Help Save the Marbled Murrelet!**

Predators such as ravens, crows, and jays are eating murrelet eggs and young birds. While looking for strewn garbage, they find the murrelet’s nest instead. Please attend to all food items at your camp and on the trails. Please don’t feed any wildlife.

***Don’t make a good bird go bad!***

# Canopy

The unseen world of the redwood canopy holds just as much life as the forest floor! Birds, berries, salamanders, conifers, lichens, bugs, and much more make up an entire ecosystem in the sky. Some species live their whole life in this lush climate-controlled refuge.

## The Tie That Binds

By Debbie Savage



fly agaric  
*Amanita muscaria*

The first thing I noticed when I moved to coastal California is the rain — up to 100 inches a year. I soon learned that the rain transforms every level of the forest into a colorful array of fungi in all sizes, shapes, and textures, revealing a hidden world with names like fly agaric, witch’s butter, and turkey tail. Intrigued, I followed a trail of fungus from the forest floor to the canopy, searching for a connection.

By maintaining a cool, moist environment, the canopy provides ideal habitat for over 300 species of fungus. Fungus is a collection of filaments or threads that may extend for several miles beneath the surface. These threads (hyphae) produce two types of fruiting bodies, mushrooms above ground and truffles underground. Most fungi obtain nutrients by breaking down leaves, cones, and other forest litter constantly shed from the canopy.

Some fungi infect young tree roots to form a beneficial structure called mycorrhizae (from the Latin mycor for fungus, rhiza for root). By growing into the roots and extending out into the soil, mycorrhizae increase the tree’s ability to absorb water and elements such as phosphorus, zinc, manganese, and copper. These filaments also produce antibiotics to protect the roots from disease. In exchange, the fungi receive sugars from the tree’s root system.

Many forest animals rely on fungi in their diet. Chipmunks on the ground and flying squirrels in the canopy dig for truffles. Roosevelt elk, black bears, banana slugs, and millipedes graze on mushrooms. In turn, these animals disperse fungus spores in their fecal pellets, and new fungi grow from the spores.

The more I learned the more I realized that fungi threads bind the old-growth forest community together. It is the thread that connects the canopy to the soil and forms a vast underground transportation system for water and nutrients. Follow that thread the next time you visit and see where it takes you.

**Epiphytes: Plants that grow on plants.**

## Aerial Gardens

By Lynne Mager

If you could take a red carpet ride above the redwood forest and look into the candelabra canopy, you would notice tremendous fern mats attached to the branches and tree trunks. Hovering above, you might glimpse the circle of life existing inside and outside these hanging gardens.

Tree-sized limbs radiating from the 1,000 year-old redwood stem provide a lofty perch for branches, bark, and needles falling through the canopy. A whole flora of fungus rots the debris into “canopy soils” — a rich humus similar to what you’d like to achieve in backyard compost. Have you looked in your soil lately? Like any healthy garden, these soil mats fill with earthworms, bugs, and crustaceans.

Researchers who climb into the canopy were 200 feet up a tree when they saw “in driving rain, on the side of the bark, this earthworm cruising at high speed . . . just going for it.” From the forest floor to the canopy, some critters find their way to aerial gardens

that offer protection from terrestrial predators.

During the rainy season, the deep soils soak up water and become a haven for epiphytes: plants that grow on plants. One researcher found over 1,000 pounds of leather fern, the most common aerial garden plant, growing in one soil mat.

Imagine flying your red carpet 100 feet down into the canopy. Here chickadees, ruby-crowned kinglets, and brown creepers gorge on red and black huckleberry thickets. An array of shrubbery normally found on the ground can also grow 300 feet above, roots firmly embedded in rich soil mats. Even western hemlock and Sitka spruce trees sprout.

When the rainy season subsides, the gardens in the sky survive on water dripping through the soil mats, a continuous sprinkler system. What’s in your



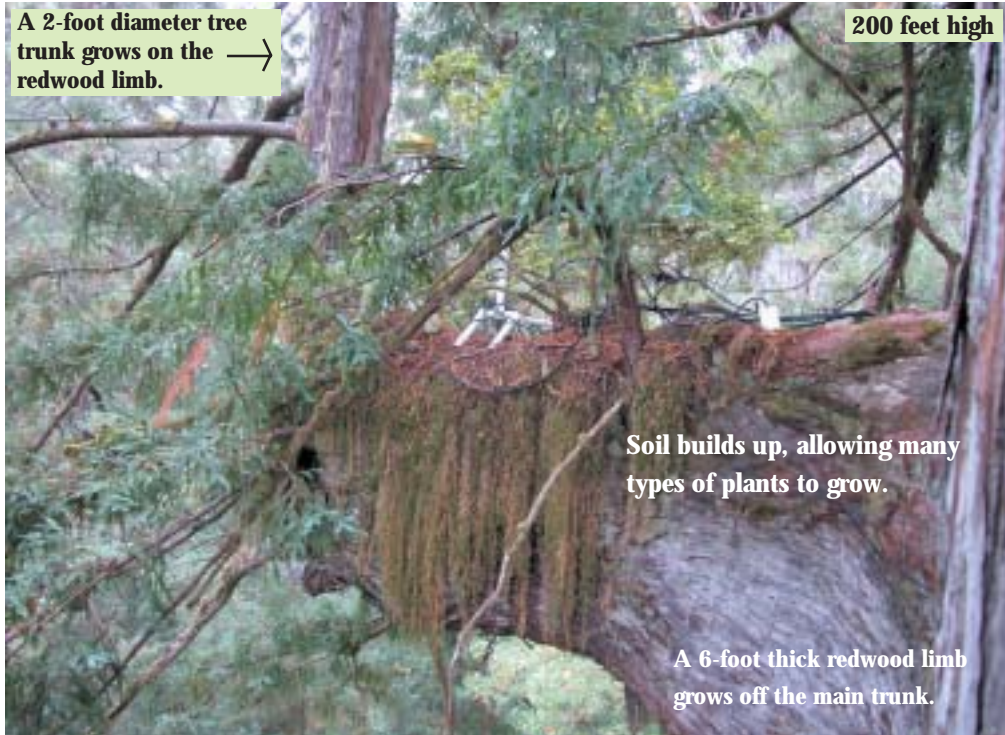
**A bouquet of leather ferns, the most common aerial garden plant, dangles from the crotch of a tree.**

*Photo by Thomas Dunklin*

backyard treetops? In the redwood canopy, “plants growing on plants” provide food, water, and shelter for an exquisite ecosystem that’s home to salamanders, birds, and mammals, some of which live their entire lives among the misty hanging gardens.

# Discovering the Unseen World

A 2-foot diameter tree trunk grows on the → redwood limb.



Soil builds up, allowing many types of plants to grow.

A 6-foot thick redwood limb grows off the main trunk.

## Monitoring the microclimate of a treetop ecosystem

Right. Canopy researchers have installed solar-powered sensor arrays that monitor microclimatic conditions in the crown; find out the amount of water stored in canopy soils; and determine how much water is transported through the trees' trunk, reiterations, and limbs. The results will inform the world about how much habitat big canopy provides for a myriad of plants and animals.

Photos by Steve Sillett and George Koch.



Top. To gain access to the canopy, Dr. Sillett's team shoots rubber-tipped arrows from a powerful compound bow over sturdy branches up to 290 feet above ground. Arborist-style rope techniques allow movement within the crown, including traversing between tall trees. (Research in Redwood National and State Parks is done by permit only.)

When mapping the crown, the team estimates the wood volume and bark surface area of the main trunk, reiterated trunks, and limbs. Eventually they will be able to estimate the mass and surface area of each tree's leaves.



## A SALAMANDER PARADISE

by Kale Bowling-Schaff

Imagine living your entire life 250 feet above the ground in the redwood canopy, breeding and sleeping in thick, moist soil mats full of tasty insects, well out of reach of ground-dwelling predators. If you were a sticky-toed salamander capable of walking up a tree trunk, this environment might make an ideal home.

The wandering salamander (*Aneides vagrans*) represents just one member of an abundant community of life high above the ground. Previously, scientists observed this three-inch-long salamander in modest numbers camouflaged among rotten logs and rock crevices on the forest floor. Now researchers who climb high in old-growth redwood trees track populations of wandering salamanders that may never come down at all. Thousands of them live in the canopy.

Wandering salamanders thrive in trees more than 400 years old. However, with 96 percent of



*High in the ancient forest canopy a plethora of mosses and lichens attach themselves to branches. Mostly absent from younger forests because they take centuries to grow, lichens fix nitrogen from the atmosphere in their tissues. Eaten by northern flying squirrels or blown to the forest floor, their nutrients leach into the ground and feed all of the forest plants. Ancient trees provide lichens a platform for growth and lichens feed the trees, completing just one cycle that binds the whole redwood ecosystem together.*

the ancient redwood canopy habitat gone, these tiny creatures have resorted to living in debris piles left behind by logging. Due to this adaptation, wandering salamander populations found from Del Norte County south to Sonoma County seem relatively secure. In contrast, amphibians worldwide continue to decline because they cannot adjust to habitat destruction.

Will there be more suitable homes for wandering salamanders and other canopy creatures as protected redwood forests grow back? Only time — and our ability to protect a community in the treetops we seldom see — will tell.

## Mammals Above!

by Debbie Weist

To see real mammalian canopy action, get out your night vision goggles. After hours, the infamous spotted owl hunts on silent wings. It might find one of its favorite foods, the red tree vole. This diminutive rodent feasts on fir needles, a waxy delicacy few animals can digest. With an abundant supply of needles in the canopy, the voles rarely descend to the forest floor.

The spotted owl also snacks on the northern flying squirrel. These squirrels feast on lichen and subterranean fungi. The squirrels don't really fly; they soar with grace and agility up to 150 feet. In contrast, they crawl awkwardly on the ground, so they spend most of their lives in the treetops as well.

Both the squirrel and vole provide essential nutrients to sustain a healthy old-growth forest by depositing fungal

spores and nitrogen-fixing bacteria with their scat (droppings). The trees rely on these fungi as symbiotic partners in nutrient absorption. From the smallest fungi to the smallest mammals to the tallest trees, a web of interdependence exists in a world outside of our normal scope of vision — the redwood canopy.

**Mammal canopy list:** *These critters either live in or forage in and around the redwood canopy:*

*hoary bat  
big brown bat  
silver haired bat  
California myotis  
long eared myotis  
long legged myotis  
western red bat  
red tree vole  
chickaree (red squirrel)  
northern flying squirrel  
Townsend chipmunk*



## TOLOWA DUNES STATE PARK



**F**or 2000 years, the Tolowa people lived in villages amongst the dunes surrounding Lake Earl and relied on the abundant fish, waterfowl, and wildlife supported by the various habitats. The diverse natural resources attracted fur traders, miners, and eventually settlers to the area.

Dense, old-growth stands of spruce, redwood, and Douglas-fir that once blanketed this area fell with the advance of settlers, loggers, and miners. Lake Earl was once used to transport redwood logs to the mill that existed on its shores. Misnamed as a lake, it is actually a coastal lagoon with a mix of fresh and salt water. A naturally fluctuating lagoon periodically opens to the sea before being closed off again by a sandbar. Developers dreamed of its potential as a freshwater port and experimented with mechanical devices to control the level of water. During the first half of the 20<sup>th</sup> century, ranchers and farmers routinely drained the lagoon to create rich pastureland around its perimeter.

In 1977 the California Department of Parks and Recreation and the Department of Fish and Game began a series of acquisitions to protect this unique wetland and delicate area. Today 10,000 acres are administered jointly by the two agencies. In October of 2001, Tolowa Dunes State Park received full status as California's newest state park. It was renamed to honor contemporary Tolowa members of the region who have ancestral ties to the area. Together, Lake Earl Wildlife Area and Tolowa Dunes State Park encompass the West Coast's largest coastal lagoon, numerous ponds, abundant wetlands, long beaches, sand

dunes, coastal pine forests, and a wide variety of ecological communities supporting a diversity of plants, animals, and birds.

Lying within the Pacific flyway, Lake Earl and its wetlands serve as an important stopover for thousands of birds. The entire population of the once endangered Aleutian Canada goose can be observed here every spring. Nearly extinct in the early 1970s, the population has recovered to over 40,000 birds. Other notable species include bald eagles, osprey, and peregrine falcon. Most birds that frequent Lake Earl

wetlands are migratory, but a few species, such as mallards and wood ducks, winter-over and nest locally. A 25-mile network of trails offers access to hikers, bicyclists, and horses. Bring your binoculars to enjoy the wildlife and scenery!

**Location:** Follow Highway 101 into Crescent City, turn northwest onto Northcrest Drive, which takes you to Old Mill Road. Drive 1½ miles to Lake Earl Wildlife Area headquarters and many trailheads. Nature walks occur weekly in the summer season. Pick up a brochure for other access points.

**For more information contact:**

**Tolowa Dunes State Park**

1375 Elk Valley Road  
Crescent City, CA 95531  
(707) 464-6101 extension 5151  
<http://www.parks.ca.gov/>

**Lake Earl Wildlife Area**

**Tolowa Dunes Nature Store**

2591 Old Mill Road  
Crescent City, CA 95531  
(707) 464-2523  
[www.dfg.ca.gov](http://www.dfg.ca.gov)

## Area Information

### LOCAL CHAMBERS OF COMMERCE

**ARCATA**

1635 Heindon Road  
Arcata, CA 95521  
(707) 822-3619  
email: [chamber@arcatachamber.com](mailto:chamber@arcatachamber.com)

**BROOKINGS**

16330 Lower Harbor Road  
Brookings, OR 97415  
(541) 469-3181 (800) 535-9469  
email: [chamber@brookingsor.com](mailto:chamber@brookingsor.com)

**CRESCENT CITY/  
DEL NORTE COUNTY**

1001 Front Street  
Crescent City, CA 95531  
(707) 464-3174 (800) 343-8300  
[chamber@northerncalifornia.net](mailto:chamber@northerncalifornia.net)

**EUREKA**

2112 Broadway  
Eureka, CA 95501  
(707) 442-3738 (800) 356-6381  
email: [eurekacc@northcoast.com](mailto:eurekacc@northcoast.com)

**KLAMATH**

Box 476  
Klamath, CA 95548  
(707) 482-7165 (800) 200-2335  
email: [info@Klamathcc.org](mailto:info@Klamathcc.org)

**MCKINLEYVILLE**

2106 Central Avenue  
McKinleyville, CA 95519  
(707) 839-2449  
email: [info@mckinleyvillechamber.com](mailto:info@mckinleyvillechamber.com)

**ORICK**

PO Box 234  
Orick, CA 95555  
(707) 488-2885

**TRINIDAD**

PO Box 356  
Trinidad, CA 95570  
(707) 441-9827  
[info@trinidadcalif.com](mailto:info@trinidadcalif.com)

*For fishing, horseback riding, kayaking,  
and other recreation, contact the local  
Chamber of Commerce.*

### NATIONAL & STATE PARKS

Redwood National and State Parks  
(707) 464-6101

Crescent City Information Center,  
ext. 5064

Jedediah Smith Visitor Center, ext. 5113

Hiouchi Information Center, ext. 5067

Kuchel Visitor Center, ext. 5265

Prairie Creek Visitor Center, ext. 5300  
[www.nps.gov/redw](http://www.nps.gov/redw)

**For camping reservations call:**  
(800) 444-7275

### AREA ATTRACTIONS

Battery Point Lighthouse Museum  
PO Box 535

Crescent City, CA 95531  
(707) 464-3089

living history tours — summer only

Del Norte County Historical Society  
577 H Street

Crescent City, CA 95531  
(707) 464-3922

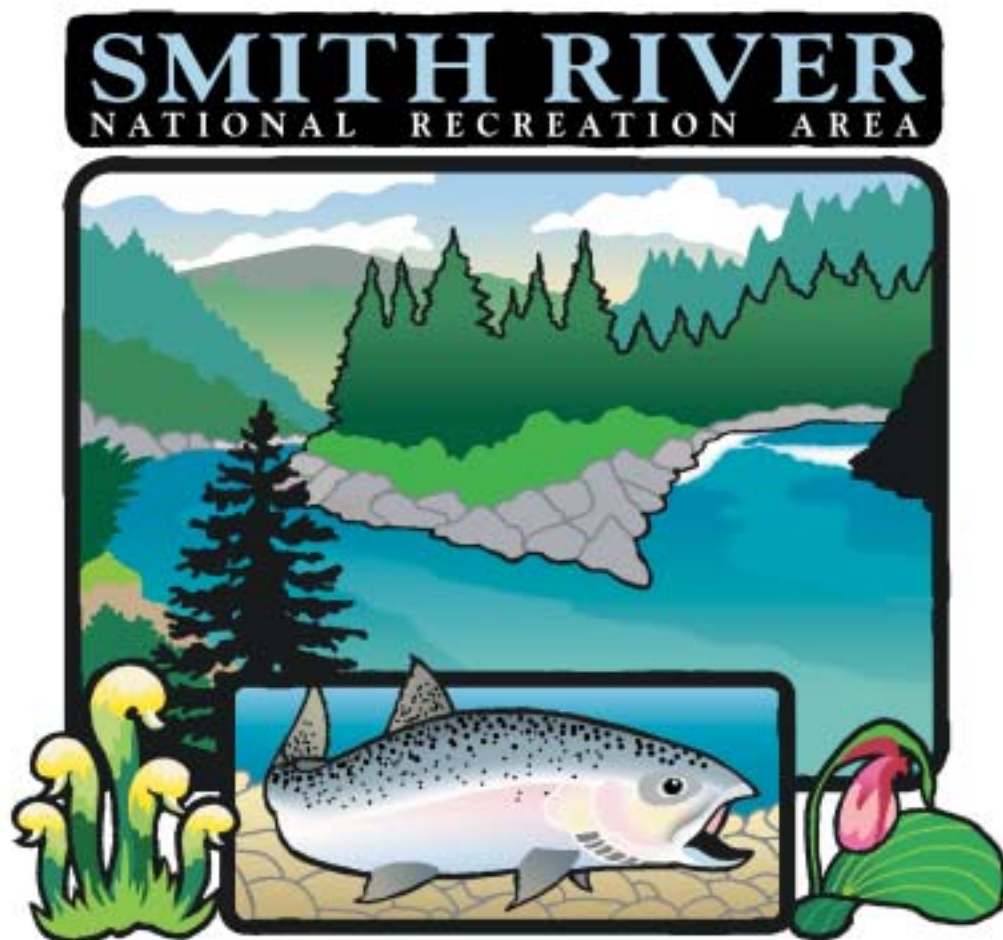
Headwaters Forest Reserve  
BLM Arcata Field Office  
1695 Heindon Road  
Arcata, CA 95521  
(707) 825-2300

Northcoast Marine Mammal Center  
424 Howe Drive  
Crescent City, CA 95531  
(707) 465-6265

Trinidad Museum  
PO Box 1126  
Trinidad, CA 95570  
(707) 677-3883

### LODGING

DeMartin Redwood Youth Hostel  
14480 Highway 101 South  
Klamath, CA 95548  
(707) 482-8265  
(800) 909-4776 ext. 733  
[www.norcalhostels.org](http://www.norcalhostels.org)



The Smith River National Recreation Area (SRNRA) invites you to a scenic playground encompassing more than 450 square miles of densely forested mountains, pristine botanical areas, remote wilderness landscapes, high-mountain lakes, and rocky canyons. The Smith River's watershed contains over 300 miles of forks and streams. Enjoy 75 miles of hiking trails and several hundred miles of roads, including the Smith River Scenic Byway.

Managed by the USDA Forest Service as part of the Six Rivers National Forest, the SRNRA was created by Congress in 1990 to protect the area's special scenic value, natural diversity, cultural and historical attributes, wilderness, wildlife, fisheries, and the Smith River's clean waters.

Dedicated and protected as part of the National Wild and Scenic River System, this crown jewel begins high in the Siskiyou Mountains and flows

freely, without a dam, for its entire length, the only major river system in California to do so. The SRNRA offers a year-round menu of recreational opportunities.

**Winter Whitewater Challenges.** Smith River tenders surprises for even the most seasoned boater on 145 miles of navigable whitewater with Class 4 and 5 rapids on all three forks.

**World-Class Fishing.** Smith River's 175 miles of anadromous fish habitat presents exceptional runs of salmon (late October through December) and steelhead (mid-December through April).

**The Smith River Scenic Byway** along Highway 199 passes through four miles of coast redwood forests and along 27 miles of rugged canyons, turbulent rapids, and the confluence of the south and middle forks of the Smith River.

**Camp along the River.** Three of the four developed campgrounds in the SRNRA are along the Smith. Panther Flat campground is open year round.

**Stay in a Lookout!** Experience a night at the top of Bear Basin Butte (5,303 feet in elevation) and see for yourself what life would be like for a fire fighter. Contact the SRNRA for information and to rent the lookout.

**For more information contact** Smith River National Recreation Area, 10600 Hwy 199, PO Box 228, Gasquet, CA 95543, (707) 457-3131.  
<http://www.fs.fed.us/r5/sixrivers/>

## What's that tree with peeling bark?

**Madrone, a less common but distinctive understory tree of the redwood forest. More often it lives on hot, dry slopes. Madrone's fast-shedding bark can be dark red, bright orange, or beryl green according to the time of year.**

## Help Save Port Orford Cedar!

At home among other local giants, Port Orford cedars can live 600 years and their cylindrical trunks can extend 200 feet from flared bases. The delicate blue-green foliage hangs from sloping



limbs like layers of textured curtains. A moisture-loving North Coast native that grows from central Oregon to extreme northern California, the tree thrives in areas with year-round surface water.

Port Orford cedar has been cultivated into more than 100 horticultural varieties, blessing parks and gardens in Europe and America. Commerce has transformed the fragrant



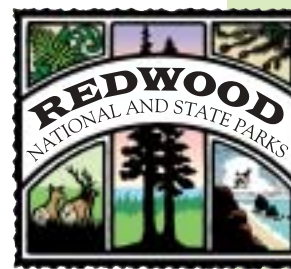
wood into boats, toys, arrow shafts, and ceremonial temples. Today, an invisible enemy threatens to eliminate this handsome softwood. A parasitic root-rotting fungus that kills Port Orford cedar has spread throughout the tree's range in the past 50 years, killing seed-

lings within a few months and mature trees in four years. The disease probably originated in a commercial nursery, then moved into the natural forest. It travels through flowing water and the spores

can live in the soil for seven years.

*Help prevent the total loss of these cedars!* Infected soil can easily be transported on shoes, equipment, clothes, and vehicles. When you travel in the Port Orford's range, inquire about contaminated areas. Scrape mud from your shoes, change into a second pair, and wash those shoes thoroughly. Avoid driving in infected areas. Respect road closures. Your efforts will help save biological diversity and wildlife support that contributes to forest wealth. Port Orford cedar locations in this area:

- Hiouchi
- Jedediah Smith Redwoods State Park
- Little Bald Hills Trail
- Smith River Nat. Rec. Area



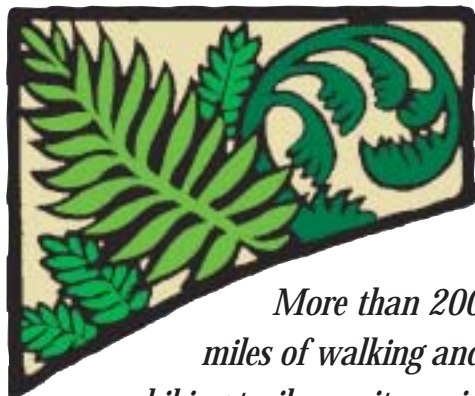
## Association Support

**Redwood Park Association and the North Coast Redwood Interpretive Association are not-for-profit**

**cooperating associations, established to aid and support the education programs within Redwood National and State Parks. At each visitor center, the associations sell a wide range of educational and informational material covering the redwood forests, the seashore, and other natural and human histories. Proceeds from sales support the parks' visitor programs, museum activities, research, exhibits, and publications.**

**Redwood Park Association**  
1111 Second Street  
Crescent City, CA 95531  
(707) 464-6101 ext. 5095

**North Coast Redwood Interpretive Association**  
Prairie Creek Redwoods State Park  
Orick, CA 95555  
(707) 464-6101 ext. 5300



More than 200 miles of walking and hiking trails await you in Redwood National and State Parks. The trails range in difficulty from easy walks to strenuous backpacking treks. They traverse a wide variety of natural habitats: old-growth redwood forests, mixed evergreen forests, coastal scrub, prairies, streams, marshes, and unspoiled beaches. Backpackers stay in designated campsites except along the Redwood Creek gravel bars. Enjoy the forest or ocean for 5 consecutive days; 15 in a calendar year. You can camp anywhere along Redwood Creek's gravel bars beyond the first seasonal bridge and no closer than within 1/4 mile of Tall Trees Grove. Be sure to obtain a permit for camping along Redwood Creek. Backpackers can collect up to 50 pounds of dead and down wood per day per campsite, except at Miners Ridge and Ossagon Creek (driftwood only). Obtain your overnight backcountry permit at a park visitor center.

# Backcountry Basics

## REGULATIONS:

- ✓ Pets, firearms, motorized vehicles, and hunting are prohibited on park trails.
- ✓ Feeding or intentionally disturbing wildlife is illegal and carries a fine.
- ✓ Store food, garbage, cooking gear, and all odorous items in food storage lockers provided in campgrounds; food storage canisters, which are available at Kuchel Visitor Center; or suspended in a tree, at least 10 feet above ground and 4 feet out from the trunk.
- ✓ Mushroom gathering or possession is illegal.

## HORSES

Horses are welcome on the following trails. Walk your mount when approaching hikers or riders.

- 🐾 Little Bald Hills Trail - access from Howland Hill Road
- 🐾 Mill Creek Horse Trails - access from Bertsch Avenue off Howland Hill Road
- 🐾 Orick Horse Trails - access from Orick Rodeo Grounds

## Backcountry Horse Regulations:

- ✓ Permits are required for overnight use and can be obtained at visitor centers.
- ✓ Camp only in designated sites.
- ✓ Carry only pellets or weed-free feed.
- ✓ Animals may not graze park vegetation.
- ✓ Animals must be hobbled or tied to a hitching post when unattended.

## HIKING SAFETY

- ▲ Filter water or bring it to a boil to be safe from *Giardiasis*, an intestinal disorder caused by a microscopic protozoan.
- ▲ River conditions in Redwood Creek can change at any time. When fording water that's above your knees, unbuckle waist and chest straps on your backpack. Brace yourself with a sturdy stick for solo crossings, or interlock arms if you are with other hikers. Seal important items in plastic bags.



- ▲ To avoid hypothermia, stay dry (bring lots of good raingear); stay out of the wind; do not wear cotton, the new synthetics are better; use a hat and gloves to preserve body heat. If you experience uncontrollable shivers, slurred speech, and fumbling hands, hypothermia is setting in. Remove all wet clothing, get into dry clothing and a sleeping bag, and drink warm fluids.

## Leave No Trace



**Plan ahead and prepare:** Inquire about the area you plan to visit; bring proper equipment; repack food into reusable containers to reduce trash; select terrain and mileage compatible with your entire group; know the regulations.

## Camp and travel on durable surfaces:

Stay on established trails; **do not** short-cut switchbacks (it is destructive and illegal); don't clear new ground for camping; camp in designated campsites to limit impacts to the resource.

## Pack it in, pack it out:

Pack out all unburnable trash; carry plastic bags for garbage; do not throw garbage into pit toilets; leave your site in better condition than you found it.

## Properly dispose of what you can't pack out:

Use pit toilets when available or bury human waste in a 6-to-8-inch-deep cat hole 100 feet away from any water; wash yourself and dishes 100 feet away from streams/ocean; strain food particles from waste water and scatter it well away from campsite and 100 feet away from waterways.

## Minimize use and impact of fires:

Strive to use portable stoves only; fires are restricted to designated fire pits (except on Redwood Creek gravel bars); collect dead and down wood only; keep fires small and contained; check fire danger level at a visitor center before you go.

## Leave what you find:

Collecting or disturbing natural features, plants, rocks, antlers, and cultural or archeological resources is forbidden.

## Backcountry Campsites

CAMPSITE	DeMartin	Elam	44 Camp	Flint Ridge	Little Bald Hills	Miners Ridge	Nickel Creek	Ossagon Creek
Number of Sites	10	3	**	11	5	3	5	3
Potable Water		◆				◆		
Non-Potable Water			◆		◆			
Creek Nearby		◆	◆		◆	◆	◆	◆
Toilet	◆	◆	◆	◆	◆	◆	◆	◆
Fire Pit	◆	◆	◆	◆	◆	◆	◆	◆
Food Locker	◆	◆	◆	◆	◆	◆	◆	◆
Picnic Table	◆	◆	◆	◆	◆	◆	◆	◆
Beach Access						◆	◆	◆
Permit Required		◆	◆			◆		◆

\*\* 44 Camp is closed to horses, open to backpackers.

Miners Ridge and Ossagon Creek are fee sites: \$3 per person per night/summer & \$2 per person per night/winter.

Pay for Miners Ridge and Ossagon Creek at Prairie Creek Visitor Center.

Dispersed camping is allowed only at Redwood Creek, which contains no amenities.

# ELK WATCHING



**T**he northern redwood region's most often seen land mammal is the Roosevelt elk. Bulls of this largest subspecies of North American elk can weigh as much as 1,200 pounds, and are aggressive in guarding their cow elk harems.

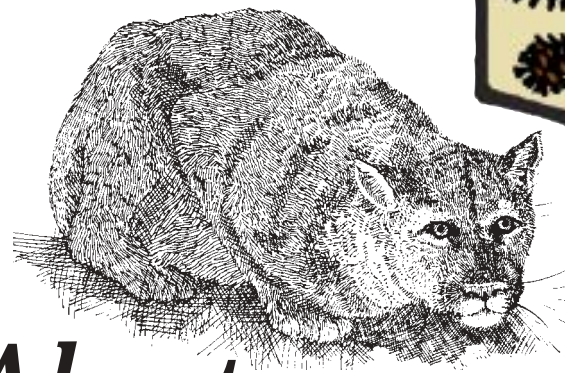
**REMEMBER that Roosevelt elk are wild animals.  
NEVER APPROACH THEM.**

One of the most popular elk-watching spots is along the Newton B. Drury Scenic Parkway in Prairie Creek Redwoods State Park. Elk Prairie is 35 miles south of Crescent City and 6 miles north of Orick. The open area on both sides of the parkway allows good year-round viewing of the herd, mostly females and calves. Large bull elk with magnificent antlers are commonly seen at Elk Prairie during the fall mating season. Calves are born in May and June.

You may see elk a few miles south of Elk Prairie off Highway 101 along Davison Road. If you follow the unpaved Davison Road (motorhomes and vehicles with a combined length of more than 24 feet are prohibited) eight miles to Gold Bluffs Beach (day-use fee area) you may take advantage of the only opportunity to see and photograph these majestic animals on the beach.

Travel eight miles along Bald Hills Road (½ mile north of Orick off Highway 101; motorhomes and trailers not advised) to reach one of the most picturesque areas for elk watching. Oak woodlands and grasslands with Redwood Creek far below provide a grand backdrop for grazing elk surrounded by ancient redwoods.

South of Orick on the ocean-side of Highway 101, lone bulls and herds of as many as 30 cow elk may be seen grazing at Stone and Big Lagoons.



## About Cougars

Cougars, or mountain lions, are large, seldom-seen inhabitants of Redwood National and State Parks. Like any wild animal, they can be dangerous. No attacks on humans have occurred within the parks, but mountain lion sightings have increased over recent years. If you should be among the few people to see a cougar, the following suggestions can help ensure a safe experience:

### Prevent an encounter

- Do not hike alone.
- Keep children in sight; do not let them run ahead of you on the trail.
- Keep a clean camp.
- Be alert to your surroundings.

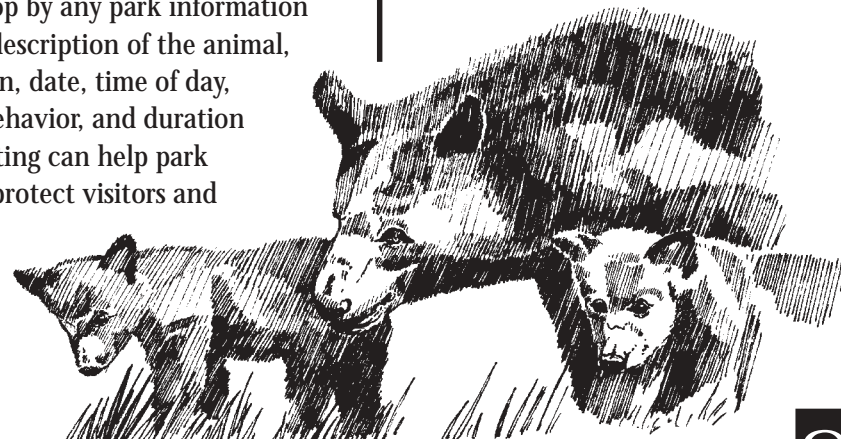
### If you meet a mountain lion

- Do NOT run!
- Do NOT crouch or bend over.
- Stand up and face it.
- Pick up young children.
- Appear large; wave your arms or jacket.
- Do not approach the lion; slowly back away.

### If a mountain lion attacks

- Do NOT turn your back or take your eyes off it.
- Shout loudly.
- Fight back aggressively.

Report all mountain lion sightings to a ranger immediately. Call (707) 464-6101 or stop by any park information center. A description of the animal, the location, date, time of day, the cat's behavior, and duration of the sighting can help park managers protect visitors and lions.



## About & Bears

Like all animals in our parks, bears are wild.

Inviting them into your picnic or camp — on purpose or accidentally — can result in damage to your equipment, you, or the bear. Bears are memory retentive and quickly grow accustomed to human foods. Wildlife managers may have to destroy bears that repeatedly visit areas where they encounter people. So that visitors continue to enjoy seeing free-roaming bears, and to avoid personal injury, please follow these precautions:

- Keep a clean camp. A bear uses its nose to read your menu. Food odors will invite a bear to pay you a surprise visit — not a good thing.
- Store food in airtight containers or wrap it carefully. Use bear-proof lockers; when they are not available, lock food in the trunk of your vehicle and/or out of sight.
- Dispose of all garbage in bear-proof trash cans or dumpsters.

Animals will often beg for food. Do NOT feed them. Once fed, animals often become increasingly aggressive in their demands for more.

**Remember: A Fed Bear Is A Dead Bear.**



# What Is Old Growth?



Coast redwoods are the tallest trees in the world. Many tower more than 300 feet.

Old-growth forest ecosystems of the Pacific Northwest are dominated by large conifers which range in age from 250 to beyond a thousand years. Twenty-five conifer species are in these forests.

In southeast Alaska and coastal British Columbia, Sitka spruce tends to be dominant; Douglas-fir in Oregon, Washington State and inland B.C.; and the stately coast redwood, largest of all, in northern California.

Younger forests share some characteristics with old-growth woodlands; however, only in old-growth forests are all of the following features present at the same time.

- **Large living trees and a multi-layered canopy.** Old and younger trees grow together in a mixture of species. The larger trees, 200 feet tall or more, have wind-damaged tops and relatively few large branches and thick growth of mosses and lichen harboring many insects, birds, and small mammals. The huge trunks often survive fires, for they are reservoirs, which hold thousands of gallons of water protected by thick bark. The uneven canopy is efficient at trapping moisture, even from thin fog during drier seasons. Bacteria living on the leaves of certain lichen capture nitrogen, essential for plant growth, from the atmosphere.

- **Large standing snags.** Dead snags may remain standing for more than 200 years. As their branches slough off, sunlight can reach the forest floor and allow species that require light, such as Douglas-fir, to germinate. Insects and woodpeckers open up the dead wood, providing habitat for many other species. In turn,

these creatures become food for the northern spotted owl, marten, black bear, and other larger predators.

- **Large down trees.** Logs, 50 tons per acre or more in stands of Douglas-fir crisscross the forest floor, helping to hold steep soils in place. Over a period of 200 to 500 years, as the logs decay, dozens of species of insects, birds, and mammals use them for shelter or food. All this activity helps raise concentrations of nutrients such as phosphorous and nitrogen in the rotting wood, and the rootlets of nearby live trees tap them for food. Like live trees, down logs can hold extraordinary amounts of water. Often rotten sapwood from such logs can be wrung out like a sponge.

- **Large fallen trees in streams.** Old-growth forests shape their streams in complex ways. Fallen trees lie in random patterns in small headwater streams. Since run-off is not powerful enough to dislodge them, such logs form semipermanent "staircases" that hold woody debris long enough for 70 percent of it to be processed as food and shelter by insects and bacteria. Fish benefit from the pool-forming ability of the forest floor by not only having the insects available for food, but also having shelter from storm run-off and temperature-controlled waters. Studies show that populations of large salmonoids, such as coho salmon and cutthroat trout, are directly related to pool volume on a stream. Given a choice between pools, large fish always congregate in the one with the most large woody debris. Fish are an end product of the old-growth forest. When northwestern fisheries declined disastrously after World War I, overfishing was blamed. Recent research suggests that this was instead the consequence of the destruction of old growth in the coast ranges, a distress signal that no one understood.

(Information from *Secrets of the Old Growth Forest* by David Kelly; Gibbs Smith Publishers, Layton, Utah; Copyright 1988. Used with permission of the publisher.)

## The Tall Tree

Area loggers' talk of "great timber" first led National Geographic Society naturalist Paul Zahl to Redwood Creek in 1963. On one particular trip, Zahl stopped on the cut-over ridge across from what would become known as the Tall Trees Grove to take some pictures. "While catching my breath, I scanned the treetops before me — then suddenly started. One particular redwood rose above the others like a giant candle. I had already measured its companions — all of them about 320 feet tall . . ."

The Tall Tree of Redwood Creek was measured at 367.8 feet and proclaimed the world's tallest tree in July 1964. As the torch of the environmental movement in the 1960s, it helped establish Redwood National Park in 1968.

In 1963 the top of the Tall Tree was green with foliage. At the time of its discovery, the forest on the opposite slope was being logged, opening the Tall Trees Grove to windier, hotter, and drier conditions. By the early 1970s, the Tall Tree's uppermost greenery had wilted and died, killing its upper branches and stem tip. Over the years the treetop flora stabilized and thickened. Then in 1989 during a winter storm, the top broke off, making the Tall Tree just another survivor in the ancient forest.

Today, there are other identified tall trees growing throughout the redwood region of northern and central California. All these trees have environmental qualities in common and a genetic heritage that allows them to attain exceptional height and stature. Growing on nutrient-rich alluvial flats (river bars and flood plains), protected from persistent winds by surrounding terrain, and developing dense stands that provide their own microenvironment, redwoods survive the seasons and the centuries.

## What's Left of the Redwoods?

Redwoods  
Historic Range:  
Two Million Acres

3% preserved  
in public lands  
1% privately  
owned and  
managed

The wedge represents what's left of the old-growth redwood forest since logging began in 1850, 4% of two million acres. Redwood National and State Parks contains 45% of all old-growth redwood forests remaining in California.

# DRIVE THROUGH A TREE?

Both giant sequoias and coast redwoods have served as drive-through trees that have fascinated travelers for years. Carving a hole through a tree reflects a time passed, a time when we didn't understand the significance of all organisms and their interplay within the environment. Now we know that the coast redwood is home to threatened and endangered species, animals that don't live anywhere else. And we know that, because redwoods do not have taproots, the mass that so inspires us to look upon them plays a major role in keeping them upright. The famous drive-through giant sequoia in the Mariposa Grove of Yosemite National Park fell in 1969 under heavy snow.

Today there are three coast redwood drive-through trees along the Highway 101 corridor in northern California. All are on private lands, all charge admission. From north to south, they are:

- Klamath Tour-Thru Tree in Klamath. Take the Terwer Valley exit.
- Shrine Drive-Thru Tree in Myers Flat.
- Chandelier Tree in Drive-Thru Tree Park in Leggett. Follow signs off Highway 101.

Whether we drive through, walk through, or peer skyward more than 300 feet to the tops of these towering ancient giants, their scale and timelessness capture our imagination and inspire our care.

## Four Longer Hikes with Big Canopy

Banana slugs and elk tracks, black huckleberries and Sitka spruce — these are just a few of the wild things you may encounter on a hike amongst the coast redwoods. And no matter what time of day or year it may be, you're also likely to encounter a slippery path. Redwoods are notorious for their drippy environment. Wear raingear and shoes that grip the ground. Be aware of windy days. The limbs of the coast redwood are known as "widow makers" because they have been known to come crashing down during strong winds. Look skyward. You'll see branches bigger than your hiking partner.

Be sure to purchase a good map, not all trailheads are marked. At the trailhead, secure your valuables in the trunk of your vehicle; leave nothing showing through the windows. Please refer to the back of this visitor guide for a list of other warnings and regulations that you'll need to know. Ask at a visitor center for bicycle trails.

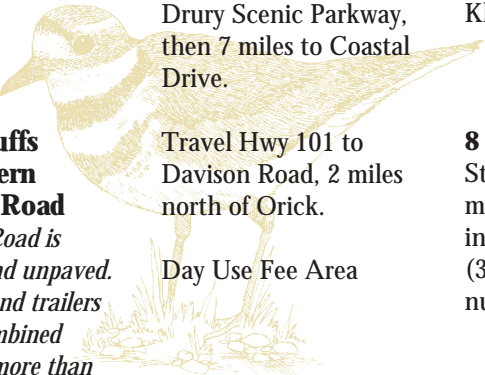
HIKE	LOCATION	TIME, DISTANCE, & FEATURES
Damnation Creek Trail	Mile marker 16.0 south of Crescent City	<b>3 hours, 4-1/2 miles round trip. Steep.</b> Travel through primeval redwood forest, where the canopy branches look like treetop arms holding thousands of plants. Be prepared, the last mile plunges 1,000 feet. Arrive at low tide, carefully make your way to the beach from the bluff, and search for tidepool creatures. Whale watching, photography, and panoramic views.
Rhododendron Trail	Prairie Creek Redwoods State Park Visitor Center or Big Tree parking area or Brown Creek Trailhead	<b>3 hours, 6 mile loop. Moderate.</b> Striking sempervirens highlight this hillside route. A fallen mother leaves the rest of the family standing to form "cathedral trees." Fire can hollow out even the largest of redwoods. Walk beside fallen giants sprouting the trail's namesake pink blossoms. Encounter clintonia, leopard lily, windflower, milkmaids, and wild ginger. Check out the pebble patterns and fish in Brown Creek.
Boy Scout Tree Trail	Jedediah Smith Redwoods State Park, mile 5 on Howland Hill Road, north side	<b>4 hours, 6 mile round trip. Moderate, some uphill.</b> Classic mature redwood forest. Huge branches hang like elbows down the side of redwood trunks. Look ever skyward into the canopy to see another redwood tree on a massive redwood branch. Travel 2-1/2 miles to the fork that leads to Boy Scout Tree, a mammoth double-trunked redwood, and 3 miles to Fern Falls, a sparkling cascade.
James Irvine - Miners Ridge Loop	Prairie Creek Redwoods State Park Visitor Center	<b>7 hours, 10 miles round trip. Moderate, climb a ridge.</b> The ancient forest beckons you. James Irvine Trail has a bridge with a sweet spot. Sit, contemplate, listen to the water. Hike to Gold Bluffs Beach and take a side trip to Fern Canyon: walk amidst 30-foot walls of ferns. Miners Ridge offers excellent views from the ridgetop and James Irvine follows a canyon with lush streamside habitat.

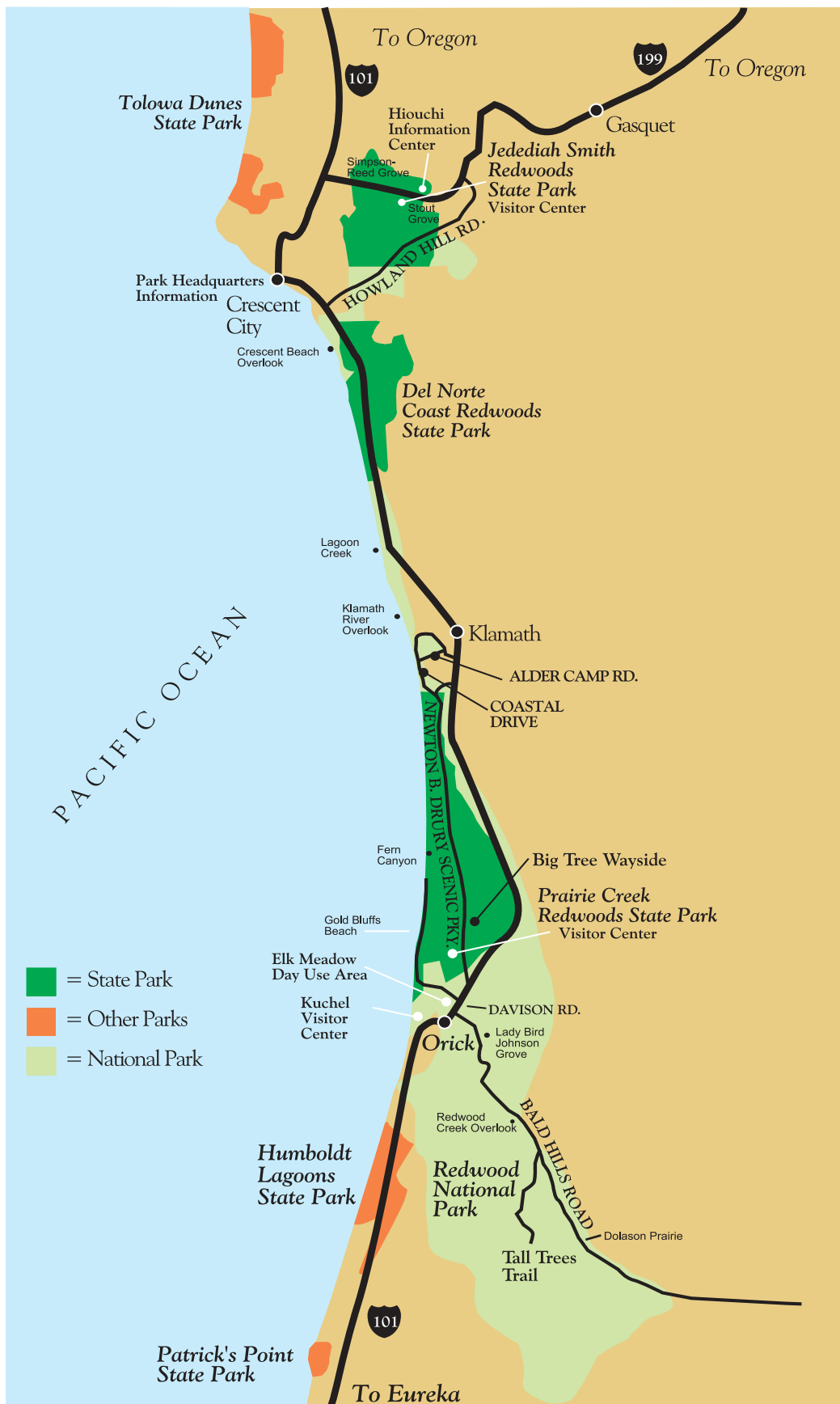
## Four Short Walks

WALK	START	TIME, DISTANCE, & FEATURES
Stout Grove	Stout Grove parking lot off Howland Hill Road, 7 miles east of Crescent City. In summer, access is available from Jedediah Smith campground.	<b>1 hour, 1/2 mile, loop</b> Beautiful, easy walk in a river-bottom group of redwoods. Paved trail from parking lot area to redwood flat is fairly steep.
Simpson-Reed Nature Trail "Barrier-free"	Park on shoulder of Hwy 199, 2 miles west of Hiouchi Information Center (6 miles east of Crescent City).	<b>1 hour, 3/4 mile, loop</b> Flat stroll on self-guided nature trail with large redwoods, octopus trees (hemlock), and many redwood-associated plants.
Lady Bird Johnson Grove and Nature Trail	Travel on Hwy 101 to Bald Hills Road (1/2 mile north of Orick). Turn right and travel 2-1/2 miles on Bald Hills Road.	<b>1 hour, 1 mile, loop</b> Easy walk on self-guided trail through beautiful redwood grove. Distant views of ocean. Picnic sites available.
Prairie Creek Nature Trail	Prairie Creek Visitor Center Day Use Fee Area	<b>2 hours, 2 miles, loop</b> Easy-to-moderate hike on self-guided interpretive trail through old-growth redwoods and along Prairie Creek.

## Four Scenic Drives

DRIVE	START	DISTANCE & FEATURES
Howland Hill Road	Travel on Hwy 101 to just south of Crescent City. Turn onto Elk Valley Road and drive 1 mile to Howland Hill Road. Can also be accessed 2 miles east of Hiouchi off Hwy 199. Follow road to Stout Grove.	<b>10 miles one way</b> Giant coast redwoods, Mill Creek, trails to Stout Grove, Nickerson Ranch, and Boy Scout Tree.
Newton B. Drury Scenic Parkway	Parkway begins 6 miles north of Orick on Hwy 101, or 4 miles south of Klamath on Hwy 101.	<b>10 miles one way</b> Old-growth redwoods, ferns, numerous trailheads, Big Tree wayside.
Coastal Drive	From the north: travel Hwy 101 to Klamath Beach Road, and follow to Coastal Drive. From the south: travel Hwy 101 to Newton B. Drury Scenic Parkway, then 7 miles to Coastal Drive.	<b>8 miles one way</b> Magnificent views of ocean, mouth of Klamath River and its estuary. Whales, sea lions, and pelicans are often seen from overlooks. Flint Ridge trailhead is about 3 miles from Highway 101 on Klamath Beach Road.
Gold Bluffs Beach/Fern Canyon Road	Travel Hwy 101 to Davison Road, 2 miles north of Orick. Day Use Fee Area	<b>8 miles one way</b> State park day-use fee is charged. 4 miles of spectacular beach; elk watching; Fern Canyon, a botanical wonder (30-foot canyon walls covered with numerous fern species).





## Maps, Field Guides, & Books

Five visitor centers operate within Redwood National and State Parks. Available for purchase in these centers are a wide range of educational and informational material covering the redwood forests, the seashore, and other natural history topics as well as regional human history. Information and gifts for all ages.

Redwood Park Association and the North Coast Redwood Interpretive Association are not-for-profit cooperating associations, established to aid and support the interpretive programs within Redwood National and State Parks. Proceeds from sales are returned directly to the parks for visitor programs, museum activities, research, library operations, exhibits, and publications. Park maps, information, and publications are available at the following locations:

- **Hiouchi Information Station** — Located on Highway 199. Open daily 9 A.M. to 5 P.M. during the summer months. ♿
- **Jedediah Smith Visitor Center** — Located in Jedediah Smith campground. Open daily during the summer months, 9 A.M. to 5 P.M., and when staffing is available in the winter months.
- **Crescent City Information Center** — Located at 1111 Second Street, Crescent City. Open daily 9 A.M. to 5 P.M. during summer months. Closed on Sundays in the winter months. ♿
- **Prairie Creek Visitor Center** — Located off Newton B. Drury Scenic Parkway. Summer hours, 9 A.M. to 5 P.M. daily. Winter hours, 10 A.M. to 4 P.M. daily. ♿
- **Kuchel Visitor Center (formerly Redwood Information Center)** — Located one mile south of Orick on Highway 101. Open daily 9 A.M. to 5 P.M. ♿

# What You Need to Know!

**PETS**—Pets are wonderful creatures that give comfort and companionship; however, a national or state park is not the best place for them. Domestic dogs or cats retain their instinct to mark territory with scent and may spread domestic diseases to wild animals. Unleashed pets may chase wildlife, causing the animals to be injured or leave their territory. Your unleashed pet may get lost and become a meal for a coyote or mountain lion.

### *If you bring your pet, please remember the following:*

- Pets must remain on a leash under six feet in length while they visit Redwood National and State Parks.
- Your leashed pet is only allowed at Crescent and Gold Bluffs beaches, the parking and picnic areas of Redwood Information Center, Lost Man Creek, the Freshwater Lagoon Spit, and state park campgrounds and roads.
- Only guide animals are allowed in park buildings or at interpretive programs.

**PARK ANIMALS**—Remember these are wild animals. Let's keep them that way. Do not approach or feed any park animals.

**PLANTS**—You are welcome to harvest berries, but plants, mushrooms, and flowers are protected and removal is prohibited.

**LITTER**—Place all garbage in trash cans or bear-proof receptacles. Do not stuff garbage cans to overflowing or place garbage outside of cans. Please use recycle bins found throughout the parks. Help keep the parks clean. Save a bear.

## Be Aware!

**POISON OAK**—*Leaves of three, let them be.* Poison oak is found in various forms throughout the parks. Sometimes it occurs in vine form, climbing the tallest redwoods in Jedediah Smith Redwoods State Park, but can also be found as a free-standing shrub. Look for the distinctive three smooth, shiny leaflets that are bright green or can be red in new shoots or during the dry season. Contact with leaves can cause an itchy skin rash, so wash thoroughly if you brush against its leaves. Stay on trails.



**TICKS**—Ticks that carry Lyme disease occur in this area. Stay on trails and check your clothing frequently. Dark-colored ticks can be seen most easily on light-colored clothing. Tuck pant legs into your socks and your shirt into your pants. Inspect your body thoroughly after a hike.

**CORVIDS, MARBLED MURRELETS, AND YOU!**—Corvids are those amazingly adaptable birds such as Steller's jays, common ravens, and American crows. Known for their antics, corvids are also known to follow easy food sources, e.g. trash, scraps, livestock feed, and bird feeder food. Once corvids find trash at a trailhead or a campground, they will repeatedly return hoping to find more easy human food.

The marbled murrelet is a robin-size seabird that nests only on large limbs high in the canopy of old-growth forests. As corvids repeatedly scan former food sources, they may spy a murrelet nest. Corvids eat murrelet chicks and eggs, disrupting nesting patterns of the adult murrelet pair.

**WE NEED YOUR HELP!** Please properly dispose of trash at trailheads and campgrounds to decrease the possibility of corvid predation on marbled murrelets, a species federally-listed as a threatened. Please do not feed any park birds.

**TIDEPOOL ETIQUETTE**—All tidepool creatures are fragile. If you pick one up, do so gently and return it to the same place—its home. Return all rocks to their original position, same side up. Tidepool life depend upon rocks for shelter. Plan your steps carefully. Slick seaweed covers the rocks; avoid injury to you and the tidepool creatures.

**BEACHES**—Plan ahead before exploring our diverse beaches. Check for storm or high surf advisories. Know the tides; tide charts are available at visitor centers. Expect sneaker waves—always face the water. Sneaker waves appear without warning and often surge up on the beach with deadly force. You cannot outrun a sneaker wave. If pulled into the surf, stay calm, call for help, and swim with the waves. Supervise children and have them wear a life jacket. Sneaker waves account for 63 percent of weather-caused fatalities on the North Coast.

**TSUNAMI PRECAUTIONS**—Earthquakes beneath the ocean floor can cause a series of large waves. If you feel a strong earthquake while on the coast, immediately move inland and to higher ground; a tsunami may be coming. Stay away from the coast. Big waves can occur for hours. Wait for an official "all clear" on the radio.



[www.nps.gov/redw](http://www.nps.gov/redw)